VLSM DIAGRAM PRACTICE SHEET 1

The company expects the use of VLSM Design to maximize the use of IP addresses. A table is to be produced showing all possible subnets that meet the Companies requirements using a VLSM design. A table for recording the VLSM design is below. Expect 0% growth of current IP requirements when determining size of subnets.

* 250 employees for S3
* 150 employees for S2
* 100 employees for S1
* 75 employees for S4
* 40 employees for S6
* 20 servers on separate subnet
* 2 WAN connection’s
* Use network 172.16.0.0/16 for internal addressing.

1. The company expects the use of VLSM to maximize the use of IP addresses. A table is to be produced showing all possible subnets that meet the company’s requirements using a VLSM design.

1. Use the following table for your VLSM design.
2. Add 1 to host requirement for use as the default gateway.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **# of Hosts** | **Network Address** | **1st Useable** | **Last Useable** | **Broadcast Address** | **Subnet Mask**  **/ Value** | **# of Possible Hosts** |
| 250 | 172.16.0.0 | 172.16.0.1 | 172.16.0.254 | 172.16.0.255 | 255.255.255.0 /24 | 254 |
| 150 | 172.16.1.0 | 172.16.1.1 | 172.16.1.254 | 172.16.1.255 | 255.255.255.0 /24 | 254 |
| 100 | 172.16.2.0 | 172.16.2.1 | 172.16.2.126 | 172.16.2.127 | 255.255.255.128 /25 | 126 |
| 75 | 172.16.2.128 | 172.16.2.129 | 172.16.2.254 | 172.16.2.255 | 255.255.255.128 /25 | 126 |
| 40 | 172.16.3.0 | 172.16.3.1 | 172.16.3.62 | 172.16.3.63 | 255.255.255.192 /26 | 62 |
| 20 | 172.16.3.64 | 172.16.3.65 | 172.16.3.94 | 172.16.3.95 | 255.255.255.224 /27 | 30 |
| 2 | 172.16.3.96 | 172.16.3.97 | 172.16.3.98 | 172.16.3.99 | 255.255.255.252 /30 | 2 |
| 2 | 172.16.3.100 | 172.16.3.101 | 172.16.3.102 | 172.16.3.103 | 255.255.255.252 /30 | 2 |